Page 1

Jusy 15 12 1.20.52 1											
Revision ID: U/R	60-748-101 sstube Installation, Hig	h Fwd		Accept	*N900	040	100)* s	etup Start Stop	IVI	S1* S2*
Start Date: 7/10 Required Date: 9/28)/12 Start Qty	y: 1.00	*1* *1*		Cust Item Customer:	ID:				1 7	
Reference:											
	ocess Plan:M		Pate: 12/07/1	G Tooling:		ate:		R	tun Star Stop	17	R1*
QC	C:	. <u></u> V	ate.	_ SFC (1/N).	D	aic		4		!7	R/
Sequence ID/ Work Center ID	Operation :			Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr	•									
D350-748-141	FU/R OK	0 12/2	116								
100		-		0.00		,					
100	DOCUMEN	NT CONTROL		OAS			4	*4	MLS	12-	10-01
DC		Memo		0.00	3/1/10/01						
Document Control		Photocopy bluefi	le & type labels per F	PPPD350-748-101	CHG002						
110				0.00				\bigcirc			
	BENDING	MACHINE - CRO	OSSTUBES	0.00				$\langle I \rangle$; 7	-8-3	
110 CNC Bend 1		Memo		0.00				V		0-2	> <u></u>
CNC Delta 100 Benders		Folio FT	Dwg D350-748-141 END .225" PER SIDE	using CNC bender progra	am D350F and		•				K* -
120	QC18-Cro	sstube Dimension	al Check	0.00							
120 QC Quality Control	act	Memo		0.00							
- ·											

										, DQ	A: (Date:	*
NCR:	Yes / No				WORK ORDER NON-	-CO	NFORI	MANCE / UPE	DATE :			_	
							,			QA Close	d: í	Date:	<u> </u>
Work Ord	er:				DISPOSITION				AGAINST [DEPARTME	NT/PROCESS		
Part No					Scrap X Machining Sma Use-as-is Thermoforming Fin			Crosstube Small Fab Finishing Composite		et or ng er	Engineering Quality Other		
Root					ption of work order update		Initial	Acti	ion	Sign &			
Cause	Date	Step	Qty		or Non-conformance	Cł	nief Eng	Descri	iption	Date	Verificat	ion	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved	12/9/11) E	1	1631 52	ting is over tolerance			MAX ALLOW TWIST = C PER DS. PER DS.	2375 2375	GY U	?n/a/	\	
Landi	ng Gear				General	FAUL	T CATE	JURY					
Lanu	Bending Centre No Cracks Crushed/C Cuffs Heat Trea	Crimped. t)/S	Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		1 '	on Incomplete ions Incomplete/U nance lled	Inclear	Ovalized Over/Und Part Inco Part Lost, Part Mov Positione Power Lo	Missing ed d Wrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
	Ripples in			-	Drill Holes		Offset		L		23/24/80	ш	Otticl

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

87337

Page 2

July-13-12 1:28:32 PM *N900040100* D350-748-101 Accept Setup Start Item ID: U/R **Revision ID:** Stop Crosstube Installation, High Fwd **Item Name:** Start Qty: 1.00 **Start Date:** 7/10/12 **Cust Item ID:** Req'd Qty: 1.00 Required Date: 9/28/12 Customer: Reference: Run Tooling: Process Plan: Date: Date: Approvals: Stop SPC (Y/N): Date: Date: Tool ID Tool # Plan Accept Reject Reject Insp. Set Up/ Sequence ID/ **Operation** Code Qty Qty Number Stamp Work Center ID Description Run Hours 0.00 125 CX12/08/31 0 *125* 0.00 HandFXtube Memo ***Stress relief*** Hand Finishing Crosstubes P10: 17794 Heat treat crosstube as per QSI010 4.3 Temp: Start time: Finish time: Inspect dimensions to drawing 127

107 QC

Quality Control

Memo

NCR:	Yes	1	No
ACIV.	103	,	110

WORK ORDER NON-CONFORMANCE / UPDATE

ηηΔ.	D	•
DQA.	Date	•

									<u>-</u>	<u> </u>	QA Closed:	D a	le:	
Work Orde	er.					DISPOSITION		•		AGAINST DE	PARTMENT	/PROCESS		
Part 1	_				· · · · · · · · · · · · · · · · · · ·	Rework Scrap			Skid-tube Machining	Crosstube Small Fab	Water Jet Engineering Prod. Eng. Coor. Quality			
NCR I	No					Use-as-is Work Order Update			noforming Large Fab	Finishing Composite	Rec/Stor	re/Packaging Supplier		
Root					Descri	ption of work order update	Į i	nitial	ı A	Action	Sign*&			
Cause		Date	Step	Qty		or Non-conformance	Chi	ief Eng	De	scription	Date	Verificatio	a QC Inspector	
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved			,											
	1 1.		l	l	L		FAUL'	T CATE	GORY			1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1 (1	The second secon	
Landi	ng Ge	ar				General						mK.s.		
	B C C	ending entre No racks	ot Concer	ntric to	o/s	Bend BOM/Route Broken/Damaged Burrs			on Incomplete	o/Uncloar	Ovalized Over/Under Part Incorred Part Lost/Mi		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled	
	Crushed/Crimped Cuffs Heat Treat			Contamination Countersink		Instructions Incomplete/Unclear Maintenance Mislabeled			Part Moved Positioned Wrong					
Ripples in Bend Drill Ho			Cut Too Short Drill Holes		Misread Offset			Power Loss/	Surge 1	Other				
:	Turning Sequence			Drawing Finish Folio		Out of S	Calibration Sequence				7			

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ræd.

root + attached to cfc to w/o

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

7

DQA:	Date:	

									QA Closed:	Date:	· · · · · · · · · · · · · · · · · · ·
Work Orde	r·				DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part N					Rework Scrap		Skid-tube Machining	Crosstube Small Fab	ł	Water Jet d. Eng. Coor.	Engineering Quality
NCR N	o				Use-as-is Work Order Update	Ine	rmoforming Large Fab	Finishing Composite	Rec/Stor	re/Packaging Supplier	Other
Root	Description of work order update Initial Action								Sign &		
Cause	Date	Step	Qty		or Non-conformance	' I					QC Inspector
Doc/Data											
quip/Tooling											
perator			1								
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etup											
Other											
Process											
Supplier											
raining						-					
Jnapproved											
					F	AULT CA	regory				
Landin	g Gear				General						
	Bending				Bend	Grain	1		Ovalized		Pressure/Forced
	Centre No	ot Concer	ntric to C	o/s	BOM/Route	Hard	ware		Over/Under	tolerance	Temperature/Cure
	Cracks				Broken/Damaged	Inspe	ction Incomplete		Part Incorred	ct	Weld
[Crushed/	Crimped.		Burrs Instructions Incomplete/Unclear				'Unclear	Part Lost/Mi	issing	Wrong Stock Pulled
[Cuffs	•			Contamination	Mair	tenance		Part Moved		
	Heat Trea	it			Countersink	Misla	ž.		Positioned V	Vrong	
Γ	Inspection	n Strip in	Tube		Cut Too Short	Misre		Power Loss/	Surge	Other	
	Ripples in Bend Drill Holes					Offset					
	Torque W	aves in E	xtrusion		Drawing	Out c	f Calibration				
	Turning Sequence Finish					Out	f Sequence				
Γ	Wave/Tw	ist in Tub	e		Folio	Outside Dimensions					

July-13-12 1:28:32 PM

tem ID: Revision ID: tem Name:	D350-748-1 U/R Crosstube Ins	01 stallation, High Fwd		Accept		*N90) 1 1 1 1 1 1 1	1100)* s	Setup Star Stop	I ZI .	S1* S2*
Start Date: Required Date: Reference:	7/10/12 9/28/12	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*			Cust Ito						
Approvals:	Process Pl	an:	Date:	_ Tooling: _ SPC (Y/N	0: 220		Date:			Run Stai Sto	17	R1* R2*
Sequétice ID/ Work Center II 150 *150* Outsource3 Outsource process -	D .	Magnetic Par Cadium Plate Embrittle reli Possibe Supp	ate per QSI017 4.1.9.1 1375° for 5 hours rticle Inspect per ASTM e per AMS-QQ-P-416B, ef at 375° for 8 hours, Colier: Southwest United I	Class 1, Type 2 Chromate Treat Industries	ours		D Tool	# Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*160 *160* Packaging Packaging			icate of conformity is att	X :	SEE	W/D CHG	ATTOCHE	D		- f	/2/4/2 2/2/4/28	(1)
*170 *170* QC Quality Control		QC5- Inspect part comple Memo	teness to step on W/O	0.00	0A 16			Ý			· · · · · · · · · · · · · · · · · · ·	

		DQA:	Date:	
	WORK OPPER MON CONTORNAL AND AND			•
MCR. Voc / No	WORK ORDER NON-CONFORMANCE / LIDDATE			

OA Closed: Date: DISPOSITION **AGAINST DEPARTMENT/PROCESS** Work Order: Skid-tube Crosstube Water Jet Engineering Rework Scrap Machining Small Fab Part No. Prod. Eng. Coor. Quality Use-as-is Thermoforming Finishing Rec/Store/Packaging Other Work Order Update NCR No. Large Fab Composite Supplier Description of work order update Action Root Initial Sign & or Non-conformance Chief Eng Description - QC Inspector Date Step Qtv Date Verification Cause Doc/Data LOAD TEST TUBE to 350013 COMPLETE. Equip/Tooling 12/1/27 14 FOR I MINUTE Operator Material 12/9/27 Setup Other NOT the (LIQUID PENETRANT) 12/9/27 162 Process Supplier Training Unapproved **FAULT CATEGORY**

Landing (Gear	General			•			
	Bending	Bend		Grain		Ovalized		Pressure/Forced
	Centre Not Concentric to O/S	BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure
	Cracks	Broken/Damaged		Inspection Incomplete		Part Incorrect		Weld
	Crushed/Crimped	Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled
	Cuffs	Contamination	L	Maintenance		Part Moved		-
	Heat Treat	Countersink	L	Mislabeled		Positioned Wrong		_
	Inspection Strip in Tube	Cut Too Short		Misread		Power Loss/Surge		Other
	Ripples in Bend	Drill Holes		Offset				
	Torque Waves in Extrusion	Drawing	_~	Out of Calibration			-	
	Turning Sequence	Finish		စိုင်္ပt of Sequence				
	Wave/Twist in Tube	Folio		Outside Dimensions				·

Work Orde July-13-12 1:28		337		*873	3.37*				Page 5
	D350-748-10 U/R Crosstube Insta	l allation, High Fwd		Accept	*N900	<u>04010</u> 0)* s	Setup Start Stop	*NS1* *NS2*
Start Date: Required Date: Reference:	7/10/12 9/28/12	Start Qty: 1.00 Req'd Qty: 1.00	*1 *1		Cust Item II Customer:	D:			
Approvals:	Process Plan QC:	n:	Date:	Tooling: SPC (Y/N):	Da Da		R	Run Start Stop	*NR1* *NR2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool # Plan Code	Accept Qty		Reject Insp. Number Stamp
*180 *180* SprayPaint Spray Painting		SprayPaint Memo 1-Prime insi 2-Prime Out	de crosstube as per side of Tube as per	0.00 0.00 QSI 005 4.2 \ 2 746 57 Dart QSI 005 4.2 \ 2 3003 s	farti 12:30 Fini Hart: Sloo Fin	sh: 1100 ish: 5145	Al	12-9	-28
190 *190* QC		QC14- Inspect Spray Pai	nt	0.00					112.09.20
Quality Control		Then, Wrap	in plastic bag to pro	tect from scratches					

200

200 Crosstubes

Crosstubes

Memo

0.00

0.00

Crosstubes

1-Install Ground wire Insert, then insert screw and washer

2-Install Abraision strips as per Dwg D350-748-141 & QSI 035.

3-Install supports Using Dt8876 as per Dwg D350-748-141, Torque to 60-80 INLBS

											DQA:	Date	e: .		
NCR:	Yes	/ No				WORK ORDER NON-O	CON	FORN	AANCE / UPDATE						
										QA (Closed:	Date	2:		
Vork Ord	er:					DISPOSITION		AGAINST DEPARTMENT/PROCESS							
	Part No					Rework Scrap Use-as-is Work Order Update		Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite				Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other		
IVCIN	140.					Work Order Opdate	-		Large Fab Composite			3uppliei [
Root					Desc	cription of work order update	1	itial	Action	Si	gn &	:			
Cause	1	Date	Step	Qty		or Non-conformance	Chie	ef Eng	Description		ate	Verification	QC Inspector		
oc/Data quip/Tooling perator laterial etup ther rocess upplier raining													-		
							AULT	CATE	3ORY						
Land	Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion					General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short Drill Holes Drawing		nstructi Mainte Mislabel Misread Offset	on Incomplete ions Incomplete/Unclear nance led	Part Part Part Posi		issing [Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other		
	\vdash	Turning Se			" ├	Finish	\vdash		Sequence						

Outside Dimensions

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Wave/Twist in Tube

Folio

Work Order ID 87337 July-13-12 1:28:32 PM				*873					Page 6			
Item ID: Revision ID:	D350-748-10 U/R	01		Accept	*N900	040	100)*	Setup S	start	*N:	S1*
Item Name:	Crosstube Inst	allation, High Fwd							S	Stop	*N!	S2*
Start Date: Required Date: Reference:	7/10/12 9/28/12	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item I Customer:	D:						
Approvals:	Process Pla	n:	Date:	Tooling:	Da	nte:	_]	Run S	Start	*NI	R1*
				SPC (Y/N):		ıte:				Stop	*NI	R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Rejec Qty		leject Iumber	Insp. Stamp
210		QC5- Inspect part compl	eteness to step on W/O	0.00 OAS								
210 QC Quality Control		Memo		0.00 PAS	10/01/							
220		Pick Kit		0.00							/ 2	12/158
220 Packaging		Memo		0.00							10	11011

230

Packaging

230

Quality Control

QC4-100% Inspect kits for completeness

Memo



NCD.	Vac	1	No
NCR:	Yes	/	No

						DQA: Date:								
NCR:	Yes	/ No				WORK ORDER NON-	COI	NFORM	MANCE / UP	DATE	·			
		_									QA Closed:	Date:		
Vork Ord	er:					DISPOSITION				AGAINST DE	PARTMENT	PROCESS		
Part						Rework Scrap Use-as-is		1	Skid-tube Machining noforming	Crosstube Small Fab Finishing	- 4	Water Jet d. Eng. Coor. re/Packaging	Engineering Quality Other	
NCR	No.					Work Order Update]		Large Fab	Composite	1.00,010.	Supplier		
Root					Descr	iption of work order update	T	Initial	Ac	tion	Sign &			
Cause		Date	Step	Qty		or Non-conformance	Ch	nief Eng	Desc	ription	Date	Verification	QC Inspector	
oc/Data quip/Tooling perator laterial etup ther rocess	ing						-							
raining	_	i												
napproved							<u> </u>	T CATE	CORY					
Landi	na (Gear					AUL	T CATE	GORY	· · · · · · · · · · · · · · · · · · ·				
Landi	ng (Gear Bending				General Bend		Grain		Г	Ovalized	Г	Pressure/Forced	
	Г	Centre No	t Concer	ntric to	o/s	BOM/Route		Hardwa	re	-	Over/Under	tolerance	Temperature/Cure	
		Cracks				Broken/Damaged		Inspecti	on Incomplete		Part Incorred	ct 🗀	Weld	
		Crushed/0	Crimped.			Burrs		Instruct	ions Incomplete/	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled	
		Cuffs				Contamination		Mainte	nance		Part Moved		-	
		Heat Trea	t			Countersink		Mislabe	eled		Positioned V	Vrong		
		Inspection	Strip in	Tube		Cut Too Short		Misread	1		Power Loss/	Surge	Other	
		Ripples in	Bend			Drill Holes		Offset		<u> </u>	-			
		Torque W	aves in E	xtrusio	n	Drawing		Out of 0	Calibration					
		Turning Se	equence			Finish		Out of S	Sequence		•	-		
		Wave/Tw	ist in Tub	e		Folio			Dimensions					

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87337

Page 7

July-13-12 1:28:32 PM Item ID: **Revision ID:** U/R Crosstube Installation, High Fwd Item Name:

Required Date: 9/28/12

D350-748-101

Accept

N900040100

Setup Start

Stop

Start Date:

7/10/12

Start Qty: 1.00 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Packaging

Date:

Tooling:

0.00

SPC (Y/N):

Date:

Date:

Start

Stop

Sequence ID/ Work Center ID

Operation **Description**

Set Up/ Run Hours **Tool ID**

Tool # Plan Code

Accept Qty

Reject Qty

Run

Reject Number Stamp

Insp.

240

Packaging

Packaging

0.00 Memo Identify and pack for shipping as per PPP D350-748-101

Date:

Location:

PPP Rev:

250

240

QC21- Final Inspection - Work Order Release

0.00

Quality Control

Memo

0.00

MLJ 12-10-01 MF 12-10-01

NCR:	Yes	1	No
NCK:	res	/	INO

						DQA: Date:								
NCR:	/es	/ No				WORK ORDER NO	N-COM	IFORN	JANCE / UPI	DATE	·			
											QA Closed:	Date:	· ·	
Nork Orde	er:					DISPOSITION				AGAINST DE	PARTMENT	/PROCESS		
Part N	•					Rework Scrap Use-as-is	,口 I	ľ	Skid-tube Machining Moforming	Crosstube Small Fab Finishing	4	Water Jet d. Eng. Coor.	Engineering Quality Other	
NCR N	10.					Work Order Update	1		Large Fab	Composite	, Recystor	Supplier	Other	
Root					Descr	ription of work order updat	te I	nitial	Act	tion	Sign &			
Cause		Date	Step	Qty		or Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspector	
oc/Data quip/Tooling perator laterial etup ther rocess upplier raining napproved	oling													
							FAUL	T CATE	GORY		<u>-1</u>			
Landi	ng G	iear				General					_		_	
	_	Bending Centre No	ot Concer	ntric to	o/s	Bend BOM/Route		Grain Hardwa	re	F	Ovalized Over/Under	tolerance	Pressure/Forced Temperature/Cure	
	-	Cracks Crushed/C	rimned			Broken/Damaged Burrs			on Incomplete ions Incomplete/l	Incloar	Part Incorred	—	Weld Wrong Stock Pulled	
	_	Cuffs	Jimpeu,		-	Contamination		Mainte		Jiicleai	Part Moved	22111B	Twiong stock Palled	
		Heat Treat	t		<u> </u>	Countersink	\longrightarrow	Mislabe		-	Positioned V	Vrong		
		Inspection		Tube	<u> </u>	Cut Too Short	\vdash	Misread			Power Loss/		Other	
		Ripples in			-	Drill Holes	<u> </u>	Offset	•	· L _	J. 5wc, 1033/.		Other	
Ì	\neg	Torque Wa		xtrusio	,	Drawing			Calibration					
ľ	_	Turning Se			卜	Finish			equence					
	$\overline{}$	Wave/Twi	•			Folio			Dimensions					

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

*Work Order ID:

87337

Parent Item:

D350-748-101

Parent Item Name:

Crosstube Installation, High Fwd

Start Date: 7/10/12

Required Date: 9/28/12

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:A New Issue 06-07-05 JLM

IPP Rev:B Update qty of MS21042L5 06-09-12 KJ

VERIFY BY:DD

IPP Rev:C Rev B 07-11-15 DD

IPP Rev D Combined manufacturing 08.04.02 EC verified by: DD

IPP Rev:E 08-06-24 revD as per dwg DD verified by:EC IPF

IPP Rev:F 10.08.04 added QSI010

4.3 DD verf:EC

IPP REV:G ADD UNDER BEND COMMENT 12-05-28 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
ALS4-1032-225 Insert		Purchased	No			200	Each	2,462.0000	1	1	M 12.	9.30	
				Location		Loc Oty	<u>L</u>	oc Code					
				FP-B		2019							i
				122	290	2019							
				ST281		420							
				108	696	146							
				110	768	62							
					386	55							
					966	68							
					269	89							
				ST282		23							
)410)451	10 13						•	
AN4-41A Bolt		Purchased	No	120	431	220	Each	411.0000	8	121.	10/ 5		S O
				Location		Loc Qty	<u>L</u>	oc Code		,		· ·	₹
				360		181							
				121	185	181							
				ST360		230							
				115	108	3							
					705	1			4				
					8838	8			7				
					0328	68			*	 			
				120	0423	150							

												DQA:	Date:	
NCR:	Yes	/ No					WORK ORDER NON-C	O	NFORM	AANCE / UPDA	NTE			
												QA Closed:	Date:	
Work Ord	er:						DISPOSITION				AGAINST DE	PARTMENT/	PROCESS	
Part NCR	Vo.						Rework Scrap Use-as-is Work Order Update		Skid-tube Crosstube Machining Small Fab Thermoforming Finishing Large Fab Composite		Small Fab Finishing		Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
IVCK	NU.						work Order Opdate)		raige rab[composite[20philei [J
Root					Des	-	otion of work order update	ł	nitial	Action		Sign &		
Cause	г	Date	Step	Qty		C	or Non-conformance	Ch	ief Eng	Descript	tion	Date	Verification	QC Inspector
oc/Data quip/Tooling perator Naterial														
etup	-													
ther														
rocess upplier														
raining														
inapproved														
							F	AUL	T CATE	GORY				
Landi	ng (Gear					General					_		_
		Bending					Bend		Grain			Ovalized		Pressure/Forced
	L	Centre No	t Concer	ntric to	O/S		BOM/Route	L	Hardwa	re		Over/Under	tolerance	Temperature/Cure
	<u> </u>	Cracks					Broken/Damaged		Inspecti	on Incomplete		Part Incorred	:t	Weld
	L	Crushed/0	Crimped.				Burrs		Instruct	ons Incomplete/Und	clear	Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs					Contamination		Mainte	nance		Part Moved		
		Heat Trea	t				Countersink		Mislabe	led		Positioned V	Vrong	
		Inspection	Strip in	Tube			Cut Too Short		Misread			Power Loss/	Surge	Other
		Ripples in	Bend				Drill Holes	Offset						
	Torque Waves in Extrusion				า		Drawing		Out of Calibration					

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

: July-13-12 1:28:31 PM

* Work Order ID: Parent Item:	87337 D350-748-101							Start D	Pate: 7/10/12	Required Date	: 9/28/12
Parent Item Name:	Crosstube Installation	on, High Fwd						Start (Qty: 1.00	Required Qty	: 1.00
AN4-6A Bolt		Purchased	No			220	Each	1,363.0000	16 M(2302)	<u> </u>	SP .
U				Location	<u>1</u>	Loc Oty		Loc Code			
				ST356		1363					
					119017	363					
					121243	500					
/					122151	500				\sim	*
AN5-32A Bolt		Purchased	No			220	Each	277.0000	4 4	SI)	(AS)
				Location	<u>1</u>	Loc Oty		Loc Code		,	·
				ST339		177					
					119862	2					
					120423	75					
					122151	100					
				ST340		100				_	
					121541	100			4	V	•
AN960JD10 Washer	NAS1149D0363J	Purchased	s¥ 122	378		200	Each	0.0000	1 1	W/12.09	.30
AN960JD416 Washer	NAS1149D0463J	Purchased	No			220	Each	29.0000	32 MIDD 32	25/	80
				Location	1	Loc Oty		Loc Code			·
				ST351		29					
/					116289	8		*			
					119097	21		. ′			1 1
AN960JD516 Washer	NAS1149D0563J	Purchased	No			220	Each	12.0000	8 M12/2	55 13	1/0/18
				Locatio	<u>n</u>	Loc Qty		Loc Code			3
				ST338		12					
					2612	12					

NCR: Yes / No

												DQA:	Date	:	
NCR:	Yes	/ No					WORK ORDER NON-C		NFORM	AANCE / UPI	DATE	04.61	D-1-	•	•
						_		_				QA Closed:	Date	:	 1
Vork Ord	ler:						DISPOSITION	•			AGAINST DE	PARTMENT	PROCESS		j
Part							Rework Scrap		ſ	Skid-tube Machining	Crosstube Small Fab	4	Water Jet d. Eng. Coor.	Engineering Quality	
NCR	No.						Use-as-is Work Order Update	Large Fab Cor			Finishing Composite	Rec/Stor	e/Packaging Supplier	Other	
Root					Des	crip	otion of work order update	1	nitial	Act	ion	Sign &			
Cause		Date	Step	Qty		C	r Non-conformance	Ch	ief Eng	Descr	ription	Date	Verification	QC Inspec	ctor
oc/Data quip/Tooling perator laterial etup ther rocess upplier raining															
							F.	AUL	T CATE	GORY					
Land	ing (Gear					General					_	_	_	
		Gear Bending Centre Not Concentric to O/S			o/s		Bend BOM/Route		Grain Hardwa			Ovalized Over/Under	⊢	Pressure/Forc Temperature/	
	\vdash	Cracks					Broken/Damaged	-	ł .	on Incomplete		Part Incorred	<u>}</u>	Weld	
	\vdash	Crushed/	crimped.				Burrs	\vdash	4	ions Incomplete/l	Juciear	Part Lost/Mi	ssing	Wrong Stock F	rulled
	-	Cuffs			}		Contamination	-	Mainte		_	Part Moved	Maria -		
	\vdash	Heat Trea	-	Tub-			Countersink	\vdash	Mislabe		<u> </u>	Positioned V	_	Joshar	
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	\vdash	Ripples in		:	_ }			\vdash	Offset	Calibratio					
	\vdash	Torque W			n		Drawing	\vdash	1	Calibration					
	1	Turning Sequence					Finish	Out of Sequence							

Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Wave/Twist in Tube

Folio

July-13-12 1:28:31 PM

* Work Order ID:	87337								
Parent Item:	D350-748-101					Start	Date: 7/10/12	Required Date:	9/28/12
Parent Item Name:	Crosstube Installation, High Fwd					Start	Qty: 1.00	Required Qty:	1.00
D2856-400 Abrasion Strip	Manufactured	No		200	f	143.0425	1.181 1	.2431579 What	તે ૩૦
	BH 89352		Location ST403 81875 ST409	Loc Oty 133.598 133.598 9.4445		Loc Code			
D3500-1	Manufactured	No	63735 68076 71164	0.6696 0.3149 8.46 220	Each	51.0000	4 5	4	i
Saddle	Manufactured						- W	<i>,</i> ,	
			Location ST423 85421 ST425 76940	Loc Oty 40 40 11		Loc Code	<u>\(\) \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ </u>		
D3501-1 Bushing	Manufactured	No		220	Each	232.0000	16	16	8
			Location ST051 67757 73391 74866 85414	Loc Oty 232 4 6 206 16		Loc Code	(b		
D3502-1 Support	Manufactured	No		200	Each	47.0000	2	2 W 12.0	Ph-30
			Location LG050	Loc Oty 37 37 10 9		Loc Code			

					. •				DQA:	Date:	. •			
NCR: Y	es / No			WORK ORDER	WORK ORDER NON-CONFORMANCE / UPDATE					Date:	:			
Work Orde	r:			DISPOSITIO	DISPOSITION			AGAINST DEPARTMENT/PROCESS						
Part N NCR N	0				work Scrap -as-is odate	Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other			
Root				Description of work order u	ıpdate	Initial	A	ction	Sign &					
Cause	Date	Step	Qty	or Non-conformance	Cł	nief Eng	Des	cription	Date	Verification	QC Inspector			
Doc/Data														
Equip/Tooling														
Operator														
Material														
Setup														
Other														
Process										-				
Supplier														
Training						į								
Unapproved		1												
					FAU	LT CATE	GORY							

Landing Gear General Bending Bend Grain Ovalized Pressure/Forced BOM/Route Centre Not Concentric to O/S Over/Under tolerance Temperature/Cure Hardware Broken/Damaged Inspection Incomplete Part Incorrect Weld Cracks Crushed/Crimped. Instructions Incomplete/Unclear Part Lost/Missing Wrong Stock Pulled Burrs Cuffs Contamination Maintenance Part Moved Countersink Mislabeled Heat Treat Positioned Wrong Inspection Strip in Tube Cut Too Short Misread Power Loss/Surge Other Ripples in Bend Drill Holes Offset Torque Waves in Extrusion Out of Calibration Drawing Turning Sequence Finish Out of Sequence Folio Wave/Twist in Tube Outside Dimensions

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

July-13-12 1:28:31 PM

*Work Order ID:	87337								
Parent Item:	D350-748-101							ate: 7/10/12	Required Date: 9/28/12
Parent Item Name:	Crosstube Installati	on, High Fwd					Start	Qty: 1.00	Required Qty: 1.00
D350-748-141TRN Crosstube Turning Detail		Manufactured	No		110	Each	2.0000	1	1
				Location	Loc Qty		Loc Code		D Rm 12-8-2
				ь ВЗЗ28 3	2				
				83277	1				
				83278	1			-	_ //
MS21042L4 Nut		Purchased	No		220	Each	2,085.0000	24 M Ja	3452 N
				Location	Loc Qty		Loc Code		<u> </u>
				ST300	2085				
7				119075	116			1	<u> </u>
/				121011	193				
				121444	1776				⊸ 1
MS21042L5		Purchased	No		220	Each	1,066.0000	4 5	4
Nut								7	1
				Location	Loc Qty		Loc Code		
				300	500			-4.	
				121652	500			4	<u> </u>
				ST300	566				
				108827	4				
				116105	5				
				116548	43				
				119109	502				_
				17651	4				−
7.500.400.40				2937	200	г 1	127.0000		- 11
MS21920-20 Clamp (per MIL-DTL-87	(83C)	Purchased	No		200	Each	127.0000	2	2 W 12.830
	,			Location	Loc Qty		Loc Code		
				LG050	127				
				116799	8			_	_
				120676	8				
				121067	2				
				121274	34				

												DQA:	Date	:
NCR:	⁄es	/ No					WORK ORDER NON-C	O	NFORM	MANCE / UPI	DATE	•		
												QA Closed:	Date	:
Vork Ord	or.						DISPOSITION		AGAINST DEPARTMENT/PROCESS					
VOIR OIG	٠'٠.						Rework			Skid-tube	Crosstube	1	Water Jet	Engineering
Part No.					Scrap			Machining	Small Fab	Pro	d. Eng. Coor.	Quality		
					Use-as-is		Therm	noforming	Finishing	Rec/Stor	e/Packaging	Other		
NCR f	١o.	· ·				١	Work Order Update			Large Fab	Composite	_	Supplier	
Doot	Root Description of work order update Initial Action Sign &													
Cause		Date	Step	Qty	Desc		r Non-conformance	1	ief Eng		ription	Date	Verification	QC Inspector
oc/Data		Dute	эсер	Qiy		<u> </u>	- 14017 CONTONTIBULEC	-	ici Liib	<i>D</i> C 3 C 1	.pc.o.ii	Dute		Composition
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napproved														
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Landi	ng (ear			_		General					_	-	_
		Bending			L		Bend		Grain			Ovalized		Pressure/Forced
		Centre No	t Concer	ntric to	o/s		BOM/Route		Hardwa	re	L	Over/Under	tolerance	Temperature/Cure
		Cracks					Broken/Damaged	<u> </u>	Inspect	on Incomplete		Part Incorre	<u> </u>	Weld
	Crushed/Crimped. B			Burrs		Instruct	ions Incomplete/I	Unclear	Part Lost/Mi	ssing	Wrong Stock Pulled			
	Cuffs Contamination					Mainte			Part Moved					
	Heat Treat Countersink					Mislabe	eled		Positioned V	_	_			
	-	Inspection		Tube			Cut Too Short	_	Misread	d .	L	Power Loss/	Surge	Other
├					Drill Holes		Offset							
		Torque W			n [-	Drawing	\perp		Calibration				
		Turning Se			ļ		Finish		Out of S	Sequence				
		Wave/Twist in Tube Folio						Outside	Dimensions					

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

Picklist Print

July-13-12 1:28:31 PM

Page 5

* Work Order ID:	87337					
Parent Item:	D350-748-101			Start 1	Date: 7/10/12	Required Date: 9/28/12
Parent Item Name:	Crosstube Installation, High Fwd			Start	Qty: 1.00	Required Qty: 1.00
MS27039-1-10 Screw	Purchased	No	200	Each 141.0000	1	1 W12.08.30
		Location	Loc Oty	Loc Code		
		GA 、	100			
	2#12244	120449	100			<u> </u>
	12 19074	ST291	5			
		120120	5			•

36 36

ST308

122027

												DQA:	Date:	
NCR:	Yes	/ No				WORK ORDER NON-C	100	VFOR	MANCE / UPD	DATE		•		
												QA Closed:	Date:	
Work Ord	or:					DISPOSITION			ar a	AGAINST	DE	PARTMENT/	PROCESS	
WOLK OIG	er.	<u> </u>				Rework	1		Skid-tube	Crosstube			Water Jet	Engineering
Part I	No.					Scrap		i .	Machining	Small Fab	-	Prod	d. Eng. Coor.	Quality
						Use-as-is			noforming	Finishing	_		e/Packaging	Other
NCR I	No.				····	Work Order Update			Large Fab	Composite			Supplier	
	3		ı	<u>.</u>						•		· 		1
Root		_	_		1	ption of work order update	ı	Initial	Act			Sign &		
Cause		Date	Step	Qty	(or Non-conformance	Ch	ief Eng	Descr	iption		Date	Verification	QC Inspector
Doc/Data							'	•						
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Operator	Ш	•		1		•		. *						
Material	Ш													
Setup						•								
Other														
Process														•
Supplier			2 1											
Training			3								•			
Unapproved					6.1									
						F	AUL	T CATE	GORY					
Landi	ing (Gear				General		_				_		_
		Bending				Bend		Grain				Ovalized		Pressure/Forced
		Centre No	ot Concer	ntric to	o/s	BOM/Route	Г	Hardwa	ire			Over/Under	tolerance	Temperature/Cure
		Cracks				Broken/Damaged		Inspect	ion Incomplete			Part Incorred	ct 📙	Weld
		Crushed/	Crimped.			Burrs		Instruct	Instructions Incomplete/Unclear			Part Lost/Mi	ssing	Wrong Stock Pulled
		Cuffs				Contamination		Mainte	· ·			Part Moved	-	-
		Heat Trea	ıt			Countersink		Mislabe			Positioned V	Vrong		

Misread

Out of Calibration

Out of Sequence

Outside Dimensions

Offset

Other

Power Loss/Surge

Ripples in Bend

Turning Sequence

Wave/Twist in Tube

Inspection Strip in Tube

Torque Waves in Extrusion

Cut Too Short

Drill Holes

Drawing

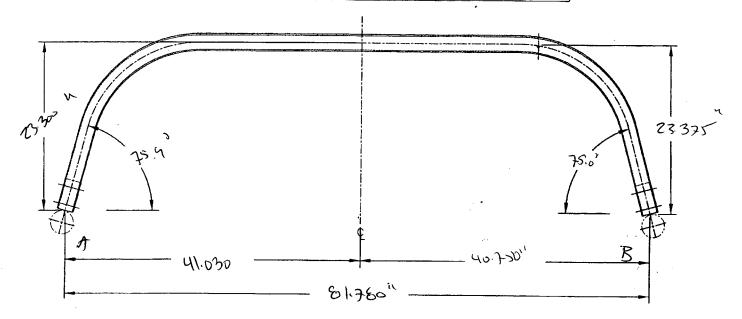
Finish

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

After Stras Rel. 1		•
DART AEROSPACE LTD	Work Order:	87337
Description: Crosstube High Fwd (AS350/355)	Part Number:	D350-748-101
Inspection Dwg: D350-748-141 Rev: F		Page 1 of 1

Required Dimension	Min	Max
Height	23.12	23.38
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.55	82.05
Bending Passes	7	
Crushing		6%
Twist		0.25



	Side A	Side B
Bending Passes		
Crushing		
twist & o	Comments	
45 - 05 5 20"	~^^	Wist = 0,370"
	, 12	(P 17/9/15
^	A-80	7 1 -7 11
facer	JULIA 100	10/11

	· · · · · · · · · · · · · · · · · · ·	•	
QC15 Inspection			
Date			

Rev	Date	Change	Revised by	Approved
Α	07.02.06	New Issue	KJ/JM	
В	10.08.23	Dwg Rev updated	KJ	
С	11.11.07	Dwg Rev updated	KJ (A	
D	12.04.16	Added bending, crushing & twist-dimensions	KJ 947	100

F

Item	Qty -141	Part Number	Description
1	х	D350-748-141	CROSSTUBE ASSEMBLY (AS 350/355 HI FWD)
2	1	D6015-125	CROSSTUBE (OR D6017-115)
3	2	D3502-1	SUPPORT
4	2	D2856-400-710	ABRASION STRIP
5	1	AELS-1032-225	INSERT
6	1	NAS1149D0363J	WASHER (OR AN960JD10)
7	2	MS21920-20	CLAMP (PER DART SPEC, M-MS21920-20)
8	1	MS27039-1-10	SCREW

GENERAL NOTES:



Ç

1) MATERIAL: MANUFACTURED FROM D6015-125 OR D6017-115

FINISHED LENGTH = 110.270±0.06

2) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2 CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2 PAINT OUTSIDE PER DART QSI 005 4.2

TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

UNITS: INCHES UNLESS OTHERWISE NOTED. BREAK SHARP EDGES: 0.005 TO 0.010 MAX.

IDENTIFICATION: DART PART NUMBER "D350-748-141" AND BATCH NUMBER ON INSIDE OF CUFF PER DART QSI 044 6.4 (VIBRATING STYLUS)

PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR Ø0.297 HOLE.

BLEND OUT ALL EDGES FROM MACHINING LONGITUDINALY, TRANSITION SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER BENDING.

10) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.

11) HEAT TREAT TO MIN. 180 KSI PERMIL-T-6736 OR AMS 2759-1C AFTER TURNING. ACCEPTABLE TO VERIFY TENSILE STRENGTHBY HARDNESS TEST PER ASTM E18 TO 40-45 HRC.

12) INSTALL D2856-400-710 ABRASION STRIPS WITH A GAP ON BOTTOM SIDE OF CROSSTUBE. CENTERED OPPOSITE D3502-1 SUPPORT, PER QSI 035.

13) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO CRACKING/CHIPPING/GROOVES.

14) TORQUE CLAMPS 60 TO 80 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

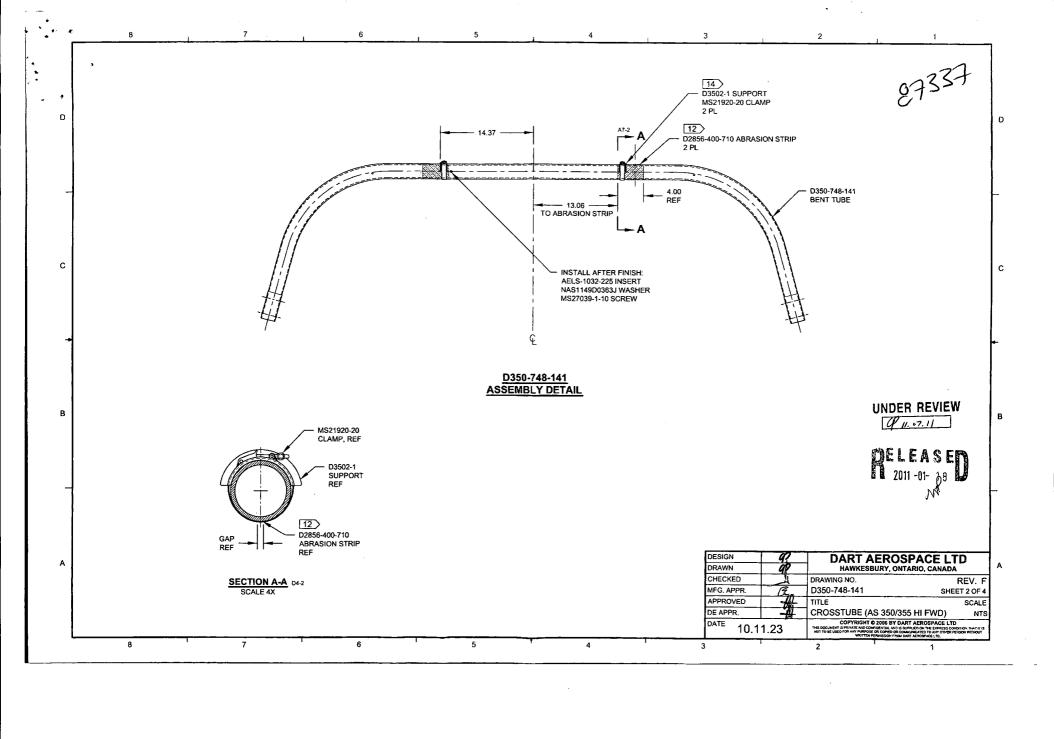
15) MAX TWIST AFTER BENDING: WITH XTUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.25 (ZN C1-3).

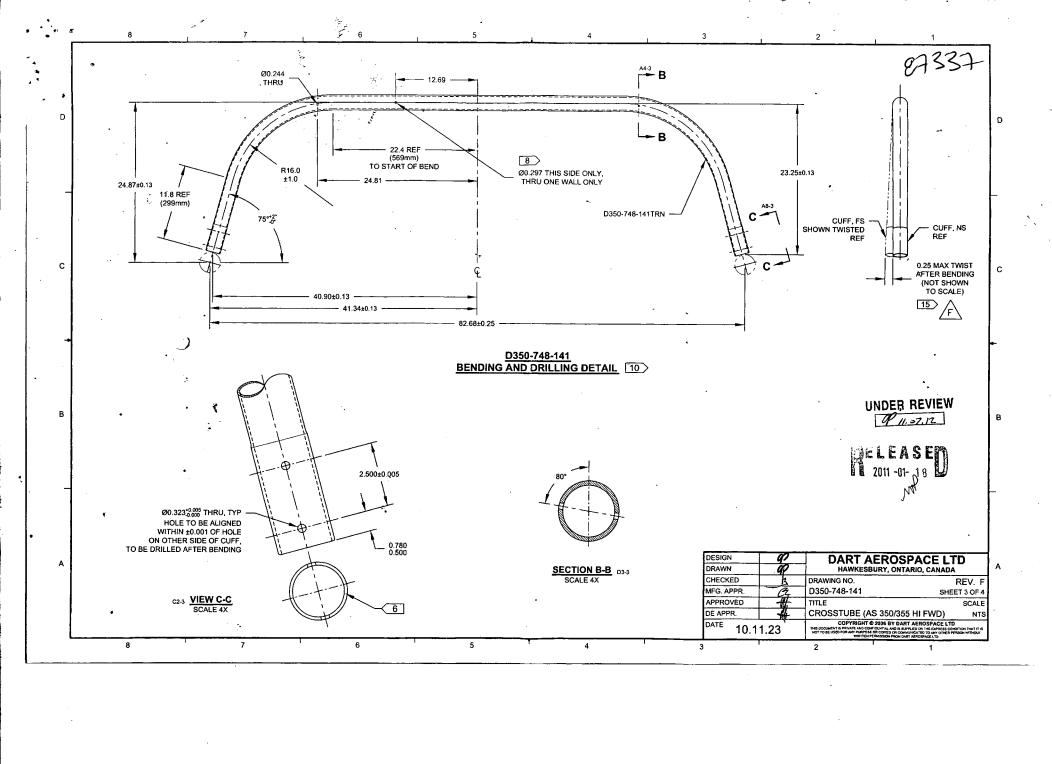
SHOP COPY RETURN TO ENGINEERING UNCONTROLLED COPY SUBJECT TO AMENDMENT WITHOUT NOTICE WITHOUT NOTER MLJ WORK ORDER MLJ NO. 87337 MLJ NO. 87337 MLJ

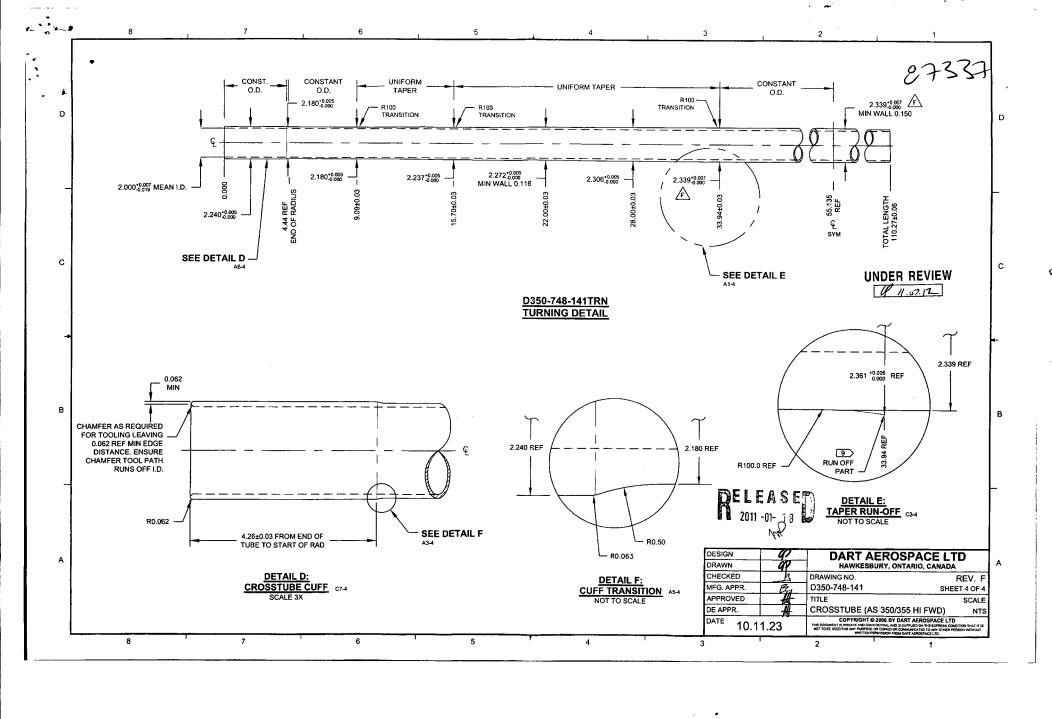
> **UNDER REVIEW** W11.07.12

В

F	TWIST	LIMIT (A8-1, (TION (B8-1) PER PAR 09-040, ADD C1-3), ADD D6015-125 OPTION NOW MACHINED (D1-4)	СР	10.11.23		
E	STANI	DARDS; RELC	IOTES; UPDATE TO CURRENT ADD CCATED FLAG #6 PER PAR 08-046 ICES (ZN C6-3, D1-3)	RF	09.09.30		
D	MAG. I	PARTICLE AN	D CAD PLATE AS MFD.	CP	06.10.31		
С	ADD C	AD PLATING		CP	06.08.14		
В	ADD D	6017-115 & PF	CP	06.06.30			
Α	NEW I	SSUE		CP	06.03.31		
REV.			DESCRIPTION	BY	DATE		
DESIGN		q)	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA				
DRAWN		97					
CHECKE	D	_h	DRAWING NO.	DRAWING NO.			
MFG. AF	PR.	E	D350-748-141	5	SHEET 1 OF 4		
APPROVED #		1	TITLE		SCALE		
DE APPE	₹.	#	CROSSTUBE (AS 350/355 H	II FWD) NTS		
DATE	10.1	1.23	COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL THOS IS BURNED ON THE EXPRESS CONSTROY THAT IT IS NOT TO BE USED FIRM ANY LARGES OF COOPED OR COMMANDATE TO ANY OTHER PERSON WITHOUT				







Messerement Befre De-Sitess

DART AEROSPACE LTD	Work Order:	87337
Description: Crosstube High Fwd (AS350/355)	Part Number:	D350-748-101
Inspection Dwg: D350-748-141 Rev: F		Page 1 of 1

Required Dimension	Min	Max
Height	23.12	23.38
1/2 Span	40.77	41.03
Angle	75	77
Total Span	81.55	82.05
Bending Passes	7	
Crushing		6%
Twist		0.25

22. CROSHING 3.356 22. CRUSHING 3.313 3.51, 3.062

41,26

2.312 CRUSHING 2.112

CRUSHIND

3-348

23.250

12-8-30

_ 41.06____

Side A	Side B
37	40
Comments	
500	
	37

QC15 Inspection	
Dat.	

Rev	Date	Change		Revised by	Approved
Α	07.02.06	New Issue		KJ/JM	
В	10.08.23	Dwg Rev updated		KJ	
С	11.11.07	Dwg Rev update J		KJ IO	
D	12.04.16	Added bending, crushing & twist dimensions	1. 1.	KJ 🛠	ap



560, boul. Arthur-Sauvé, St-Eustache (Québec) J7R 5A8 Tél. 450 473-1884 Télécopieur/Fax administration 450 491-5498 Télécopieur/Fax production 450 491-6454

Certificat de Conformité
Certificate of Compliance

BON DE TRAVAIL CHARGEMENT order Jose 178880

<u>LIVRÉ À / shipped to:</u> DART AEROSPACE (270 ABERDEEN

HAWKESBURY

ON KSA (K)

<u>- 2007 - Olektinet - 202</u> - 400 - 1940 - 2440 B - 1774 - 2540 BROBER

- JOHN MEERLEY

CAN X8A 1K7

DESCRIPTION DES PIÈCES 90 DS GUANTITÉ parts description cuantly D350-748-101 180 (4) REF.: 87338 CROSSTUBE (1) D355-748-101 CROSSTUBE REF: 87332 (1) D350-748-101 CROSS TUBE REF: 97337 (1) D350-748-201 CROSSTUBE REF: 87228 (1) D350-748-201 CROSSTUBE REF: 87223 (4) D350-748-201 CROSSTUBE REF: 87225 CONTENANT: 1 NIL

COMMENTAIRES / comments

CERTIFIÉ par / Certified by:

med (

DATE: 2012-09-04



560, boul. Arthur-Sauvé, St-Eustache (Québec) J7R 5A8 Tél. 450 473-1884 Télécopieur/Fax administration 450 491-5498 Télécopieur/Fax production 450 491-6454

Certificat de Conformité Certificate of Compliance

BON DE TRAVAIL order	CHARGEMENT .
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<u>OL/ENT/oustomer</u> 212 DART ABROSPACE DIC ABBROSEM PLOYMESBURY

ON KSA IKT

UVRÉ À / shipped to: DART AEROSPACE 1276 ABERDESN HAVAKESBURY

ON KBA 1K7

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TUROTE DU CLIENT BONDE LYRAISON DU CLIENT DUSTOMBIT DE CUSTOMBIT SHIPPET RO.	MATÉRIEL meteriel	CODE DE TRAITEMENT matil heat code	NUMÉRO DE LO: lotaumbs:
F0217788 L	Steel		

SPÉCIFICATIONS DU PROCÉDÉ

processing specifications

STRESS REL

SAE AMS 2759/1 REVIE

TUBENCE / requirement | SPÉCIFICATIONS / specifiedTESTS EXÉCUTÉS / performed | RÉSULTATS DE TESTS / results | Peusl

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CERTIFICATE OF CONFORMANCE

CADORATH PLATING CO. LTD. 2150 LOGAN AVENUE **WINNIPEG, MANITOBA R2J-0J1**

DATE:

Sep-26-2012

CONSIGNED TO: Dart Aerospace Ltd.

1270 Aberdeen St.

Hawksbury, ON K6A 1K7

W/O #:

117651

INVOICE #:

62539

CONTRACT OR

PURCHASE ORDER #

PO17909

DESCRIPTION:

CROSSTUBE

QTY

P/N # d350-748-101

7

[^]87337 S/N #/

STRIP AND CADMIUM PLATE IAW AMS-QQ-P-416C TYPE 2 YELLOW CLASS 1. MPI IAW ASTM-E-1444. BAKE HEAT CHART # 12-974 AND # 12-993.

CERTIFICATE: I certify that the items indicated here on have been inspected and tested and conform to all specifications and requirements detailed on the contract or purchase order.

Approved Inspector:



ACUREN	LIQUID PENET	RANI IESI REP	UKI
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CLIENT	Don't AcroSPACE	DATE S	738-12 TIME AM 7 PM 0
ATTENTION	ANDY		19-12.CO35E
	1270 ABELDEEN ST	PO/WO No.	
ADDRESS	HANKESBURY ON	WORK LOCATION Sain	
	MINES SULY ON!		
			417/05/033 REV./DATE 2005
PROJECT		CROSS TUBE).′
ITEM(S) EXAMINED	<u>6</u> UN	78	
JOB DESCRIPTI	ON PROCEDURE NO. LT-COO REV./DATE	2000 TECHNIQUE N	O. LT- BUHZ REV./DATE 2008
	SEE PESULTS		L 430THICKNESS VARIOUS
PART NO.	WET FLOWESCENT LICE	NIATERIAL SET	TOPE TO A O
SCOPE A		_	TYSICELIEN WITH
CARLES	and on THE 100% of	Surface.	
TEST DETAILS		· · · · · · · · · · · · · · · · · · ·	
METHOD	FLUORESCENT UVISIBLE		☐ SOLVENT REMOVABLE ☐ POST EMULSIFIED
FAMILY BRAND	MANAGER PROFILE THE VEST MINI	BLACK LIGHT S/N / 6459	□ OUTPUT > 1000 μ W/cm ² □ AMBIENT < 2 fc T □ TROUBLELIGHT □ OUTPUT>100 fc @ SURFACE
PENETRANT PENETRANT REMO	MINIMUM DWELL TIME 45 10 MIN. VER #20 MINIMUM DRY TIME >10 MIN.	OTHER LUS, NO	TE MOODLELIGHT E OUTFOT FOO IC W SORFACE
DEVELOPER	SKDS MINIMUM DWELL TIME 10 MIN.	LIGHT METER S/N	CAL DUE DATE ACC
DEVELOPER TYPE	Non Aqueous Aqueous Dry		<i>3012</i> .
TEST SURFACE			
SURFACE CONDITION		MACHINED SHOT B	
	ATURE < - 4°C/ 20°F - 4°C/ 20°F to 10°C/50°	′ r	0°F το 52°C/125°F □ > 52°C/125°F
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Scope of Services			
The agreement of Acuren	Group Inc. to perform services extends only to those services provided for in writing. Und ments and expressions of opinion reflect the opinions or observations of Acuren Group Inc.	based on information and assumptions supplie	d by the owner/operator and are not intended nor can they be construed as
representations or warran	ries. Acuren Group Inc. is not assuming any responsibilities of the owner/operator and the	e owner/operator retains complete responsibilit	y for the engineering, manufacture, repair and use decisions as a result of t
Chandand of Com	provided by Acuren Group Inc. In no event shall Acuren Group Inc.'s liability in respect of		
In performing the service implied, is made or intend	s provided, Acuren Group Inc. uses the degree, care and skill ordinarily exercised under sir led by Acuren Group Inc.	milar circumstances by others performing such	services in the same or similar locality. No other warranty, expressed or
SIGNATURES			
	NTATIVE A.A. Chaidas		DTR# E- 120 588
CLIENT REPRESE	NTATIVE Andy Shelder PRINT	SIGNATURE	
TECHNICIAN (SIGN	ATURE):		REPORT REVIEWED BY:
NAME (Bour):	MARIANT.		NAME INITIALS
NAME (PRINT):	15 TECHNICIAN	2 ND TECHNICIAN	
	CGSB LEVEL SNT LEVEL CGSB LI		
1	CGSB REG. NO 6000 CGSB R	eg. No	